

REMARKS / ARGUMENTS

I. General Remarks.

Please reconsider the application in view of the above amendments and the following remarks.

II. Disposition of Claims.

Claims 1-32 are pending in this application. Claims 1-3, 5-10, 12, 16, 18-20, 24, and 27 have been amended to clarify the claims. The remaining claims are original to the application.

III. Rejection of Claims 2-9 Under 35 U.S.C. § 112.

The Examiner stated: "Claims 2-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement." (Office Action at 2.)

With respect to enablement, the Examiner stated:

The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 2-9 depend from claim 1 which recited the step of injecting an expandable member into a fracture. Claims 2 then recites the member is compress and inserted into a mass of fibrous network. As currently written, the claims appear to disclose the expander member is injected into a fracture and then compressed and inserted into a fibrous network. Claim 8 further recites injecting the newly formed structure into a fracture. It is unclear at what step the expandable member is injected into the fracture.

(Office Action at 2.)

Applicants traverse, and assert that the subject claims are enabled. For enablement, "[a]ll that is necessary is that one skilled in the art be able to practice the claimed invention, given the level of knowledge and skill in the art." MANUAL OF PATENT EXAMINING PROCEDURE § 2164.08 (8th ed., rev. 2, May 2004) [hereinafter MPEP]. Applicants respectfully submit that support for claims 2-9 may be found in the Specification. For example, the Summary of the Invention provides, "Prior to injecting the expandable member into the fracture, the

expandable member is compressed and inserted into the center of a mass of a fibrous network. The compressed structure is then placed inside of a mold cavity. An aqueous soluble mixture containing a filler material and adhesive is then injected into the mold cavity and allowed to cure until it forms a solid structure, which encapsulates the expandable member. The solid structure containing the expandable member is then removed from the mold cavity and ready for injection into the fracture.” (Application ¶ 11.) Thus, the subject matter of claim 2-9 is described in the Specification such that a person skilled in the art would recognize how to practice the invention.

Accordingly, Applicant respectfully asserts that claims 2-9 fully comply with the enablement requirement of the first paragraph of 35 U.S.C. § 112. Applicant respectfully requests the withdrawal of the rejection currently imposed against claims 2-9, and earnestly solicits the timely issuance of a Notice of Allowance for these claims.

IV. Rejection of Claims 1 and 18 Under 35 U.S.C. § 102(e).

Claims 1 and 18 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Nguyen, U.S. Pat. No. 5,908,073 [hereinafter “‘073”], Nguyen, U.S. Pat. No. 6,752,208 [hereinafter “‘208”], and Hussain et al., U.S. Pat. No. 6,528,157 [hereinafter “‘157”]. (Office Action at 3-4.) Applicants respectfully traverse, and assert that these references do not teach every element of the subject claims. To anticipate a claim under § 102(e), a reference must describe each and every element set forth in the claim. MPEP § 2131.

A. ‘073 Does Not Teach Every Element of the Claims as Required to Anticipate the Claims.

With respect to ‘073, the Examiner writes:

Referring to claim 1, Nguyen discloses a method of forming an in-situ filter for controlling flowback of proppants injection into fracture of the formation comprising the step of injecting the an expandable member into the fracture (col. 2, lines 5-8).

Referring to claim 18, Nguyen discloses a system comprises a plurality of encapsulated compressed expandable members (see fig. 3, 10) placed in a fracture.

(Office Action at 3.) To anticipate Applicants’ invention, ‘073 must teach every element of the invention. MPEP § 2131. Applicants respectfully submit that the references do not teach using every element as recited in claims 1 and 18 as amended.

1. Rejection of Claim 1.

Applicants respectfully submit that '073 does not teach using a spring as recited in amended claim 1. Rather, '073 teaches using "fibrous bundles," which are "comprised of a plurality of individual fibers which are connected together whereby portions of the fibers are free to flare outwardly." ('073 col. 3, ll. 45-47 & Fig. 2.) Therefore, Applicants respectfully assert that amended claim 1 is novel and nonobvious over '073. Applicants respectfully request withdrawal of the rejection under 35 U.S.C. § 102(e) against claim 1, and further request the timely issuance of a Notice of Allowance for claim 1.

2. Rejection of Claim 18.

Applicants respectfully submit that '073 does not teach using "a plurality of encapsulated springs" as recited in amended claim 18. Rather, '073 teaches using "fibrous bundles," which are "comprised of a plurality of individual fibers which are connected together whereby portions of the fibers are free to flare outwardly." ('073 col. 3, ll. 45-47.) Therefore, Applicants respectfully assert that amended claim 18 is novel and nonobvious over '073. Applicants respectfully request withdrawal of the rejection under 35 U.S.C. § 102(e) against claim 18, and further request the timely issuance of a Notice of Allowance for claim 18.

B. '208 Does Not Teach Every Element of the Claims as Required to Anticipate the Claims.

With respect to '208, the Examiner has stated that:

Referring to claim 1, Nguyen discloses a method of forming an in-situ filter for controlling flowback of proppants injection into fracture of the formation comprising the step of injecting the an expandable member into the fracture (col. 2, lines 16-25).

Referring to claim 18, Nguyen discloses a system comprises a plurality of encapsulated compressed expandable members (see figs. 3-5) placed in a fracture.

(Office Action at 4.) To anticipate Applicants' invention, '208 must teach every element of the invention. MPEP § 2131. Applicants respectfully submit that the references do not teach using every element as recited in claims 1 and 18 as amended.

1. Rejection of Claim 1.

Applicants respectfully submit that '208 does not teach using a spring as recited in amended claim 1. Rather, '208 teaches using "compressed sieves constructed from shape memory materials." ('208 col. 3, ll. 2-4 & Fig. 2.) Therefore, Applicants respectfully assert that amended claim 1 is novel and nonobvious over '208. Applicants respectfully request withdrawal of the rejection under 35 U.S.C. § 102(e) against claim 1, and further request the timely issuance of a Notice of Allowance for claim 1.

2. Rejection of Claim 18.

Applicants respectfully submit that '208 does not teach using "a plurality of encapsulated springs" as recited in amended claim 18. Rather, '208 teaches using "compressed sieves constructed from shape memory materials." ('208 col. 3, ll. 2-4.) Therefore, Applicants respectfully assert that amended claim 18 is novel and nonobvious over '208. Applicants respectfully request withdrawal of the rejection under 35 U.S.C. § 102(e) against claim 18, and further request the timely issuance of a Notice of Allowance for claim 18.

C. '157 Does Not Teach Every Element of the Claims as Required to Anticipate the Claims.

With respect to '157, the Examiner has stated that:

Hussain discloses a method of forming an in-situ filter for controlling flowback of proppants injection into fracture of the formation comprising the step of injecting an expandable member (fibers can expand outward) into the fracture (Fig. 1a).

Referring to claim 18, Hussain discloses a system comprises a plurality of encapsulated compressed expandable members (10) placed in a fracture.

(Office Action at 4.) To anticipate Applicants' invention, '157 must teach every element of the invention. MPEP § 2131. Applicants respectfully submit that the references do not teach using every element as recited in claims 1 and 18 as amended.

1. Rejection of Claim 1.

Applicants respectfully submit that '157 does not teach using a spring as recited in amended claim 1. Rather, '157 teaches using a "resin-coated proppant comprising a

particulate substrate e.g., sand, and a fiber-containing resin.” (‘157 col. 4, ll. 8-10 & Fig. 1A.) Therefore, Applicants respectfully assert that amended claim 1 is novel and nonobvious over ‘157. Applicants respectfully request withdrawal of the rejection under 35 U.S.C. § 102(e) against claim 1, and further request the timely issuance of a Notice of Allowance for claim 1.

2. Rejection of Claim 18.

Applicants respectfully submit that ‘157 does not teach using “a plurality of encapsulated compressed expandable members” as recited in amended claim 18. Rather, ‘157 teaches using a “resin-coated proppant comprising a particulate substrate e.g., sand, and a fiber-containing resin.” (‘157 col. 4, ll. 8-10 & Fig. 1A.) Therefore, Applicants respectfully assert that amended claim 18 is novel and nonobvious over ‘208. Applicants respectfully request withdrawal of the rejection under 35 U.S.C. § 102(e) against claim 18, and further request the timely issuance of a Notice of Allowance for claim 18.

V. Rejection of Claims 10-11 Under 35 U.S.C. § 103(a).

Claims 10-11 stand “rejected under 35 U.S.C. § 103(a) as being unpatentable over Hussain et al. in view of Montgomery, U.S. Pat. No. 6,070,666 [hereinafter “‘666’].” (Office Action at 5.)

With respect to obviousness, the Examiner has stated that:

Hussain discloses an in situ filter for controlling flow back of proppants comprising a plurality of interspersed expandable members (10, fibers can be compressed and expand outwardly). Hussain does not disclose a network of fibrous material. Montgomery teaches using fibrous material in a fracture to prevent slumping of a proppant (col. 3, lines 47-55).

Referring to claim 11, Hussain, as modified does not disclose the fibrous network is stainless steel wool or composite fibrous sponge. However, Montgomery does disclose the fibrous can comprise metal fibers and stainless steel wool is a well known metal fiber. AS one of ordinary skill in the art would be familiar with the use of stainless steel wool, it would be obvious to one of ordinary skill in the art at the time of the invention to further modify the invention disclosed by Hussain to use stainless steel wool as suggested by Montgomery.

(Office Action at 5.) To obviate Applicants' invention, '157 in view of '666 must teach or suggest every element of the invention. MPEP § 2143 and 2143.03. Applicants respectfully submit that these references do not teach or suggest in-situ filters using "a network of fibrous material and a plurality of interspersed springs," as required by the subject claims.

As discussed above, '157 does not teach or suggest using "a plurality of interspersed springs" as required by both amended claim 10 and claim 11, which depends from claim 10. Nor does '666 teach or suggest using "a plurality of interspersed springs."

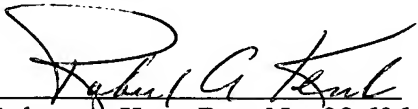
Therefore, Applicants respectfully assert that both amended claim 10 and claim 11, which depends from claim 10, are nonobvious over '157 in view of '666. Applicants respectfully request withdrawal of the rejection under 35 U.S.C. § 103(a) against claims 10-11, and further request the timely issuance of a Notice of Allowance for these claims.

SUMMARY

In light of the above remarks and amendments, Applicants respectfully request reconsideration and withdrawal of the outstanding objections and rejections. Applicants further submit that the application is now in condition for allowance, and earnestly solicit timely notice of the same. Should the Examiner have any questions, comments, or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the attorney of record by telephone, facsimile, or electronic mail.

Applicants believe that there are no fees due in association with this filing of this Amendment and Response. However, should the Commissioner deem that any fees are due, including any fees for extensions of time, Applicants respectfully request that the Commissioner accept this as a Petition Therefor, and direct that any additional fees be charged to Halliburton Energy Services, Inc. Deposit Account No. 08-0300.

Respectfully submitted,

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